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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,468	10/23/2001	Fatemeh Mojtabai	FMI-001	4328
959	7590	07/02/2004	EXAMINER	
LAHIVE & COCKFIELD, LLP. 28 STATE STREET BOSTON, MA 02109			LEE, MATTHEW C	
			ART UNIT	PAPER NUMBER
			1631	

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/003,468	Applicant(s) MOJTABAI, FATEMEH	
	Examiner Matthew C Lee	Art Unit 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-61 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-8 and 55-58, drawn to methods of forming/making an ordered structures, classified in class 436, subclass 71.
- II. Claims 9-18, drawn to a two-dimensional ordered structure, classified in class 530, subclass 350.
- III. Claims 19-28, drawn to a three-dimensional ordered structure, classified in class 530, subclass 350.
- IV. Claims 29-40, drawn to a method for determining the shape of an amphiphilic molecule, classified in class 702, subclass 50.
- V. Claims 41-48, drawn to a method for screening a test compound, classified in class 435, subclass 7.1.
- VI. Claims 49-54, and 62, drawn to a protein chip, classified in class 530, subclass 350.
- VII. Claims 59-61, drawn to a method for determining the structure of a protein, classified in class 702, subclass 20.

The inventions are distinct, each from the other because of the following reasons:

Invention I is related to inventions II and III as products and process of making.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process

(MPEP § 806.05(f)). In the instant case the method of invention I can be used to make at least two materially different products such as those recited in invention II and III, each reciting different ordered structures having different properties. Furthermore, the product of invention II or III can be made by methods other than that of invention I, for example, ordered structures can be made by nanoscale manipulation techniques such as AFM or STM.

Invention I is unrelated to inventions IV-VII. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In this instant case, invention I is directed to methods of forming/making an ordered structure. The inventions IV, V and VII are directed to methods that each recite different steps, perform different functions and have different effects from invention I. Invention VI, directed to a protein chip, is unrelated to invention I because they are not disclosed as capable of being used together.

Invention II is unrelated to Inventions III, VI and VII. In this instant case, invention II is directed to 2-dimensional ordered structures. Invention III is directed to 3-D dimensional ordered structures. Because 2-dimensional and 3-dimensional structures have different functions and properties that are patentably distinct, they are unrelated inventions. Invention VI is directed to a protein chip. It is a different product from invention II and has different effects and functions. Invention VII is directed to a method of determining the structure of proteins. Invention II and VII are not related because they are not disclosed as capable of being used together.

Invention II is related to Inventions IV and V related as product and process of using. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, invention II is patentably distinct from inventions IV and V because it can be used to practice methods other than those of inventions IV and V, for example, the product of invention II can be used in a crystal growing method wherein the 2-dimensional ordered structure is used as a monolayer to induce nucleation of organic and inorganic 3D crystals at the air-solution interface.

Invention III is related to Inventions IV and V as product and processes of using. In this instant case, invention III is patentably distinct from the methods of IV and V because it can be used to practice methods other than those of IV and V, for example, as micellar vesicles in drug delivery methods.

Invention III is unrelated to Inventions VI and VII. In this instant case, invention III, directed to a 3-dimensional ordered structure, is not disclosed as capable of being used together with the method of invention VII. Invention VI, directed to a protein chip, is a different product from invention III having different structure, properties, functions and/or use.

Invention IV is unrelated to inventions V, VI, and VII. In this instant case, invention IV, directed to a method of determining the shapes of amphiphilic molecules, is unrelated to the methods of V and VII because they recite different method steps and

have different modes of operation. Invention IV is unrelated to invention VI because they are not disclosed as capable of being used together.

Invention V is unrelated to inventions VI and VII. In this instant case, the method of invention V is unrelated to the product of invention VI because they are not disclosed as capable of being used together. The method of invention V is unrelated to the method of invention VII because they each recite different method steps, have different modes of operation and effects.

Invention VI is unrelated to invention VII. In this instant case, the product of VI is not disclosed as capable of being used together with the method of VII.

Because these inventions are independent or distinct for the reasons given above and the searches required for each group are not coextensive, restriction for examination purposes as indicated is proper.

Election of Species

This application contains claims directed to the following patentably distinct species of the claimed invention: If applicant elects Invention I, applicant is required to elect a single embodiment of the claimed invention that specifies each of the following:

- A. species of protein from claim 4, and 57,
- B. species of interface from claim 6.

If applicant elects any of inventions II-VII applicant is required to elect a single embodiment of the claimed invention that specifies each of the following:

- A. in claims 10, 20, 30, and 51, species of amphiphilic molecules
- B. in claims 12, 22, 32, 44, and 60, species of protein
- C. in claim 45, species of assay activity,

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over

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the prior art, the evidence or admission may be used in a rejection under 35

U.S.C. 103(a) of the other invention.

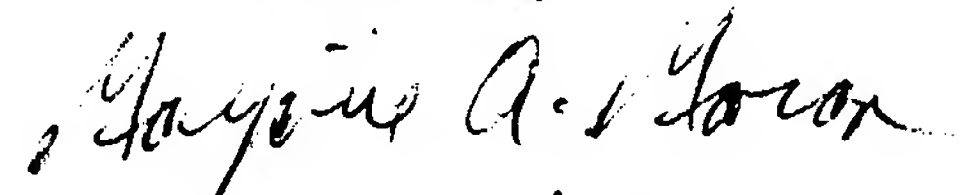
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C Lee whose telephone number is (571) 272-2931. The examiner can normally be reached on 8am - 4:30pm, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL P WOODWARD can be reached on (571) 272-0722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Matthew C. Lee
6/24/2004

MARJORIE MORAN
PATENT EXAMINER


6/28/04